MODIS Emergency Backup

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MODIS Science Data Support Team

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Developers

- MODIS Science Team
  - At-launch MODIS Science software
- MODIS Science Data Support Team
  - Produce and archive products from L1B-L4
- Goddard DAAC
  - Produce and archive Level 1A
  - Handle interface to ancillary data providers

Goals of Emergency Backup

- Develop a computing system to support Q/A, validation and early science of MODIS algorithms for the first 6 months after launch
- Distribute a limited volume of products to MODIS Science and Validation teams and other AM-1 instruments
- Develop a system capable of being scaled up to function as a backup for ECS Release B.0’

Requirements for Backup System

- Enable thread tests of MODIS software
- Maintain science software compatibility with ECS
- Process sufficient data for validation
- Support quality assurance
- Support early science
- Support rapid software development
- Scalable

Approach

- Extend SeaWiFS production system
  - Add Tiling for L2G and L3 products
- Simple interface to data archive
- Demonstrable incremental builds
- Build upon Team Leader SCF capacity
- Hands on operations as well as scheduled production

Maximum Capacity

- Level 1A and ancillary data sets* 5 months (116GB/day)
- Level 1B, geolocation and cloud mask 1 month (200GB/day)
- Ocean (every 5th line & sample) 4 months (4GB/day)
- Data over validation sites 5 months (2GB/day)
- Ocean, land & atmosphere L2, 3, 2 weeks (330GB/day)

*L1A and ancillary data are stored at GSFC DAAC

Remaining products stored in Automated Tape Libraries at the MODIS Team Leader SCF

Data distribution in Emergency Backup

- Network distribution from TL-SCF to MODIS Science Team SCFs
- DLT or 8mm tape to Science Team
- Sample data sets at TL-SCF and DAACs*

*Explore sample data set distribution via WWW with the DAACs

Current Activities

- Incorporating Version 1 MODIS science software into the emergency backup's processing framework
- Developing post-launch visualization tools
- Prioritizing resource usage in the backup system/TL-SCF
  - geolocation post processing
  - algorithm improvement
  - calibration/validation